

2. (Amended)

An isolated nucleic acid molecule encoding a TNHx transporter polypeptide, PNHx transporter polypeptide, or a fragment of a polypeptide having Na<sup>+</sup>/H<sup>+</sup> transporter activity that provides increased salt tolerance in a cell, comprising a nucleic acid molecule selected from the group consisting of:

- (a) a nucleic acid molecule that hybridizes to all or part of a nucleic acid molecule shown in [SEQ ID NO:1], or a complement thereof under moderate or high stringency hybridization conditions, wherein the nucleic acid molecule encodes a TNHx transporter polypeptide, a PNHx transporter polypeptide or a polypeptide having Na<sup>+</sup>/H<sup>+</sup> transporter activity and capable of increasing salt tolerance in a cell;
- (b) a nucleic acid molecule degenerate with respect to (a), wherein the nucleic acid molecule encodes a TNHx transporter polypeptide, a PNHx transporter polypeptide or a polypeptide having Na<sup>+</sup>/H<sup>+</sup> transporter activity and capable of increasing salt tolerance in a cell.

3. (Amended)

The nucleic acid molecule of claim 2, wherein the hybridization conditions comprise moderate or high stringency conditions, wherein the moderate stringency conditions are 40-50 degrees Celsius, 5xSSC, 2% SDS; wash: 50 degrees Celsius, 0.1xSSC, 0.1% SDS and wherein the high stringency conditions are 55-65 degrees Celsius, 5xSSC, 2% SDS; wash: 60-65 degrees Celsius, 0.1xSSC, 0.1% SDS.

4. (Amended)

*pkc* > An isolated nucleic acid molecule encoding a TNHx transporter polypeptide or a PNHx transporter polypeptide, or a fragment of a polypeptide having Na<sup>+</sup>/H<sup>+</sup> transporter activity and that provides increased salt tolerance in a cell, comprising a nucleic acid molecule selected from the group consisting of:

- (a) the nucleic acid molecule of the coding strand shown in [SEQ ID NO:1], or a complement thereof;
- (b) a nucleic acid molecule encoding the same amino acid sequence as a nucleotide sequence

of (a); and

- B<sup>1</sup>
- (c) a nucleic acid molecule having at least 30% identity with the nucleotide sequence of (a) and which encodes a TNH<sub>X</sub> transporter polypeptide or the PNH<sub>X</sub> transporter polypeptide or a polypeptide having Na<sup>+</sup>/H<sup>+</sup> transporter activity.

6. (Amended)

The nucleic acid molecule of claim 1, comprising all or part of a nucleotide sequence shown in [SEQ ID NO:1], or a complement thereof.

7. (Amended)

B<sup>2</sup> *pcv* *>* An AtNH<sub>X</sub> nucleic acid molecule isolated from *Arabidopsis thaliana*, or a fragment thereof encoding a transporter polypeptide having Na<sup>+</sup>/H<sup>+</sup> transporter activity that provides increased salt tolerance in a cell.

*sub 21*

8. (Amended)

A recombinant nucleic acid molecule comprising a nucleic acid molecule of any of claims 1 to 4 and a constitutive promoter sequence or an inducible promoter sequence, operatively linked so that the promoter provides transcription of the nucleic acid molecule in a host cell.

12. (Amended)

B<sup>3</sup> *pcv* *>* The nucleic acid molecule of any of claims 1 to 4, wherein the TNH<sub>X</sub> transporter polypeptide or the PNH<sub>X</sub> transporter polypeptide extrudes monovalent cations out of the cytosol of a cell to provide the cell with increased salt tolerance, wherein the monovalent cations are selected from at least one of the group consisting of sodium, lithium and potassium.

19. (Amended)

B<sup>4</sup> *sub 21* *>* A host cell comprising the recombinant nucleic acid molecule of claim 8, or progeny of the host cell.

~~B2 Sub D107~~  
21. (Amended)

A plant, a plant part, a seed, a plant cell or progeny thereof comprising the recombinant nucleic acid molecule of claim 8.

23. (Amended)

B6  
The plant, plant part, seed or plant cell of claim 21, wherein the plant, plant part, seed or plant cell is of a species selected from the group consisting of alfalfa, almond, apple, apricot, arabidopsis, artichoke, atriplex, avocado, barley, beet, birch, brassica, cabbage, cacao, cantalope, carnations, castorbean, cauliflower, celery, clover, coffee, corn, cotton, cucumber, garlic, grape, grapefruit, hemp, hops, lettuce, maple, melon, mustard, oak, oat, olive, onion, orange, pea, peach, pear, pepper, pine, plum, poplar, potato, prune, radish, rape, rice, roses, rye, salicornia sorghum, soybean, spinach, squash, strawberries, sunflower, sweet corn, tobacco, tomato and wheat.

~~B2 Sub D107~~  
26. (Amended)

A method for producing a recombinant host cell that expresses a nucleic acid molecule, the method comprising introducing into the host cell a vector of claim 17.

~~Sub C8 B8~~  
28. (Amended)

The method of claim 26, wherein the genome of the host cell also comprises a functional TNHX or PNHX gene.

29. (Amended)

The method of claim 26, wherein the genome of the host cell does not comprise a functional TNHX or PNHX gene.

~~Sub C9 B9~~  
31. (Amended)

A method for expressing a TNHX or PNHX transporter polypeptide in the host cell of claim 19, the method comprising culturing the host cell under conditions suitable for gene expression.

53. (Amended)

B<sup>10</sup> A method of producing a genetically transformed plant which expresses or overexpresses a TNH<sub>X</sub> transporter polypeptide, a PNH<sub>X</sub> transporter polypeptide or a polypeptide having Na<sup>+</sup>/H<sup>+</sup> transporter activity and provides increased salt tolerance in a cell and wherein the plant has increased salt tolerance, comprising:

- B<sup>10</sup>
- (a) cloning or synthesizing a TNH<sub>X</sub> nucleic acid molecule, a PNH<sub>X</sub> nucleic acid molecule or a nucleic acid molecule which codes for a Na<sup>+</sup>/H<sup>+</sup> transporter polypeptide, wherein the polypeptide is capable of providing salt tolerance to a plant;
  - (b) inserting the nucleic acid molecule in a vector so that the nucleic acid molecule is operably linked to a promoter;
  - (c) inserting the vector into a plant cell or plant seed;
  - (d) regenerating the plant from the plant cell or plant seed, wherein salt tolerance in the plant is increased compared to a wild type plant.

B<sup>11</sup> 55. (Amended)

The nucleic acid molecule of claim 4, comprising SEQ ID NO.1.